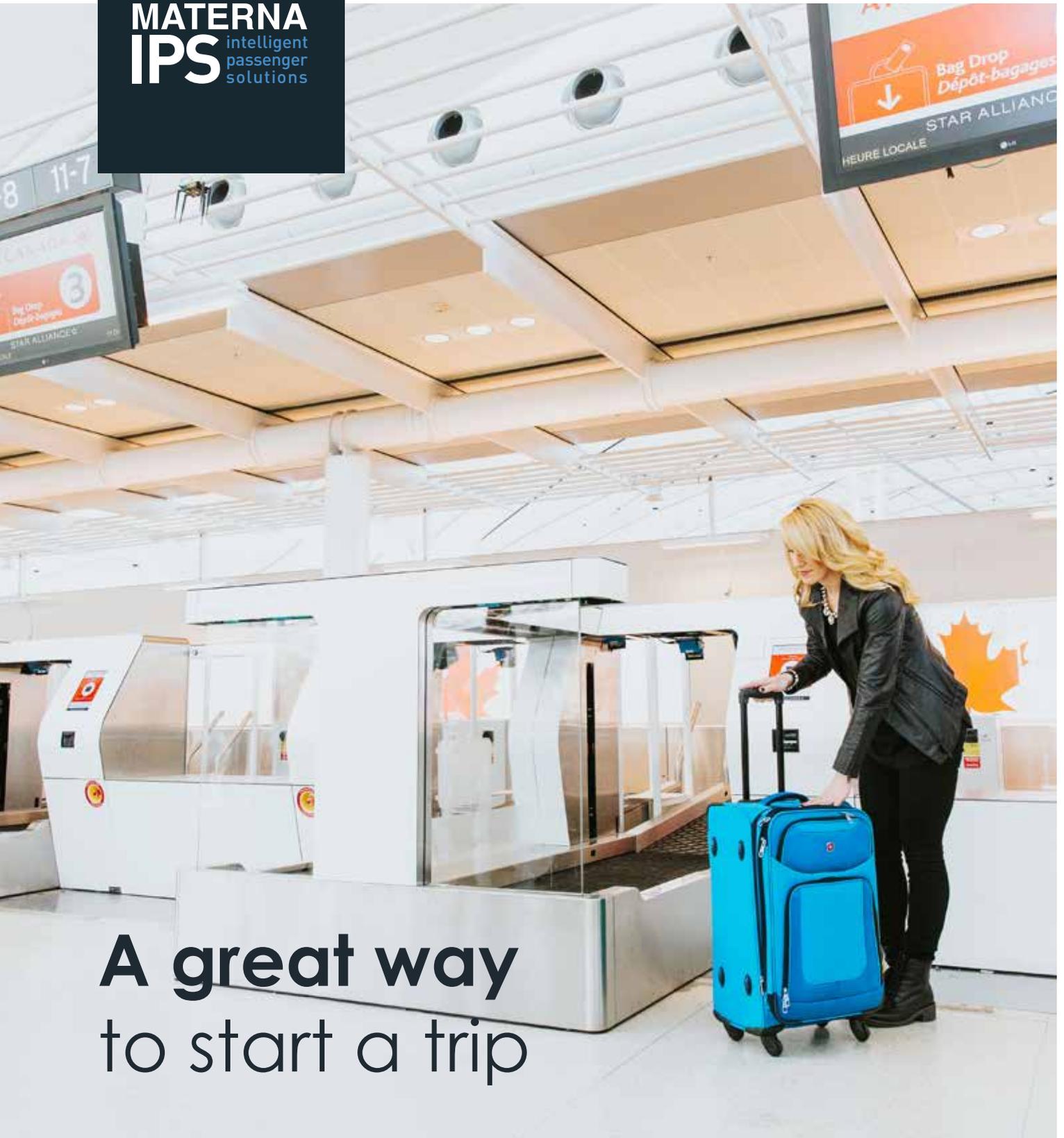


MATERNA
IPS intelligent
passenger
solutions



**A great way
to start a trip**

For more information:
www.materna-ips.com

About us

Materna ips has been a leading player in the aviation industry for over three decades. Our customers include airports, airlines and ground handling companies like Lufthansa, easyJet, Emirates, DNATA, Gatwick, eurowings, Hamburg Airport, John Wayne Airport, Swedavia, Oslo, Toronto, Bangalore and Vienna Airport.

Our long-term track record is your guarantee for field-proven, reliable, secure and elegantly designed solutions that simplify your passenger's journey. With our first-class software and hardware products you can offer your customers a seamless user experience from curbside to boarding. Our one-stop-shop

portfolio consists of check-in, baggage drop-off and access solutions combined with payment, biometric and field services.

As a longstanding IATA member, we actively drive the market, contribute to the creation of new standards and are present at all the relevant hotspots for the industry.

A great way to start a trip for your passengers.

Our worldwide footprint

> **150,000**
DAILY BAG DROPS

> **300,000**
DAILY CHECK-INS

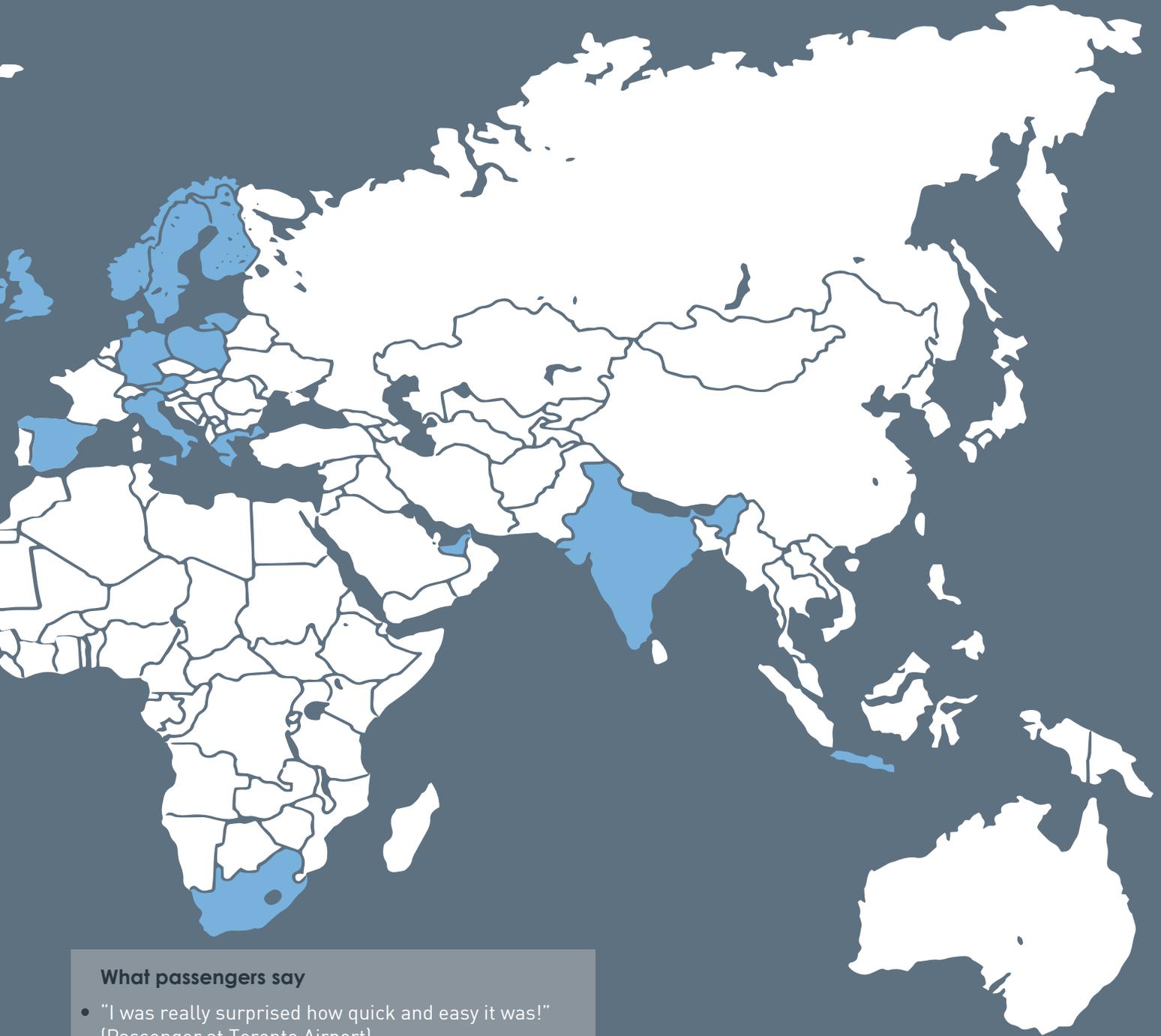
> **75**
AIRPORTS

> **800**
INSTALLATIONS

What our customers say

- **Swedavia:** "The solution from Materna fulfilled our requirements, such as for ease of use, very well indeed. Materna also delivers great cost effectiveness." Lena Rökaas, Head of Operations
- **Toronto Pearson International Airport:** "We have had some amazing customer reactions. People are excited to take care of their own bags. And even if we are still in the initial phase of the project we already see the benefits." Richard Hayward, Manager Customer Service
- **London Gatwick Airport:** "We are extremely pleased to have Materna on board, as we work together so well." Gavin Jackson, Project Leader Check-In Transformation
- **Hamburg Airport:** "Many of our passengers have already discovered the benefits of the kiosks for themselves and given us very positive feedback. We have hardly encountered any technical anxiety on the part of our passengers. The system is straightforward and self-explanatory." Johannes Scharnberg, Director of Aviation





What passengers say

- “I was really surprised how quick and easy it was!”
(Passenger at Toronto Airport)
- “I have so much more time. I’ll go shopping now.”
(Passenger at Toronto Airport)
- “Love those new bag drop machines. It’s the future of aviation!” (Passenger at London Gatwick Airport)
- “So impressed! Bag drop and security done in less than 20 minutes.” (easyJet passenger)





Materna installation @ Stockholm/Arlanda



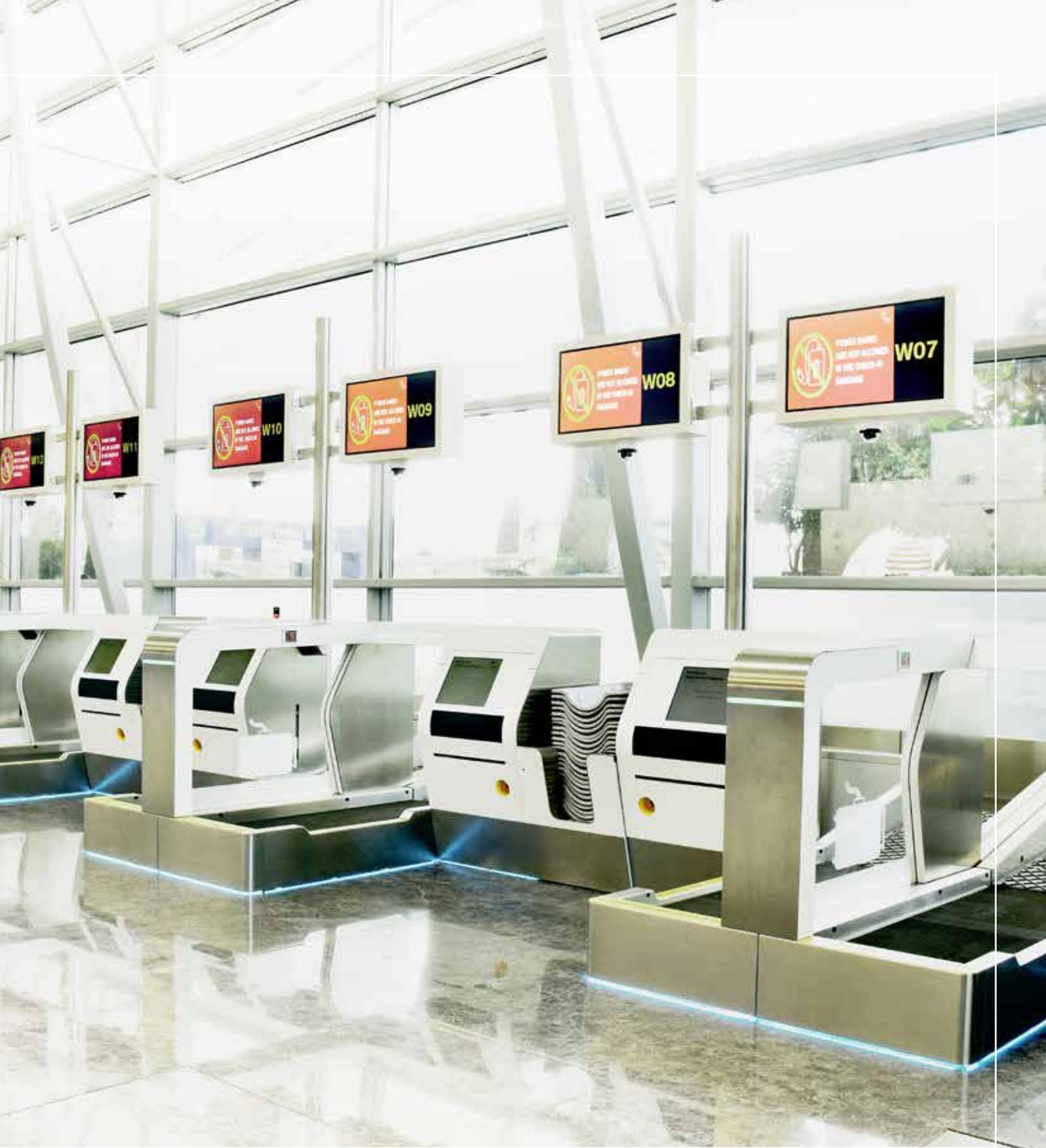
Check-in

Simple, easy to use and intuitive

Passenger check-in is one of our core competencies. We have been the market leader in this area for many years and offer kiosk check-in solutions, mobile and web check-in as well as counter solutions based on CUPPS and CUTE. Materna IPS check-in solutions allow passengers to do their kiosk check-ins in a pleasingly short time. With our flexible and robust kiosk systems we also offer our certified CUSS-platform and application which are fully compliant with IATA RP 1706c and allow easy airline integration. While integrating future technologies into our solutions, we offer biometrics and payment functions for an improved passenger experience.

What makes us outstanding

- Lowest possible maintenance effort due to the large paper stocks for boarding cards and bag tags
- Space and cost savings due to multi-airline usage at the same kiosk (100% IATA CUSS standard compliance)
- Maximum convenience for passengers due to flexible payment and biometric integration in the check-in process directly at the kiosk
- Low failure risks due to the use of long-lasting premium hardware components



Materna installation @Kempegowda International Airport Bengaluru, India



Baggage drop-off

Drop your bag off in less than 30 seconds

With a baggage drop-off time of less than 30 seconds, our self bag drop solutions for airlines, airports and ground handlers allow passengers to enjoy a maximum of comfort and to gain lots of time. As a pioneer in self-service baggage drop-off we have continuously improved our systems and are the proud provider of the world's largest automated bag-drop installation at London Gatwick Airport. Our systems are extremely flexible: they can even handle groups of passengers as well as providing built-in payment services for excess baggage.

Our self bag drop solutions are CUSS- and CUWS-compliant (IATA RP 1701f and RP 1741) and support multiple airline departure control systems (DCS). We support all options for one-

step and two-step baggage processing (kiosk, retrofit and off-airport).

What makes us outstanding

- Individual solutions through multiple models for freestanding and retrofit self bag drops
- Space and cost savings due to multi-airline usage on the same kiosk (100% IATA CUSS and CUWS standard compliance)
- Hassle-free excess baggage handling because of the built-in payment function
- Waste-free and incredibly quick bag tag attachment processes due to compatibility with linerless bag tags



Materna installation @ Hamburg Airport



Access

Best mix of security and convenience

Our access solutions offer a reliable, fast and convenient access to airport security areas for passengers and staff. We provide certified single or multi-line gates for the following:

Pre-security

When passengers pass from landside to airside, our software checks their boarding passes and verifies the information by comparing it with the airport's database.

Lounge

Our solution allows secure access to specific areas, such as lounge access. Boarding pass validity and validity corresponding to flight times are also checked.

Self-boarding

Our self-boarding gates interact with the airline-

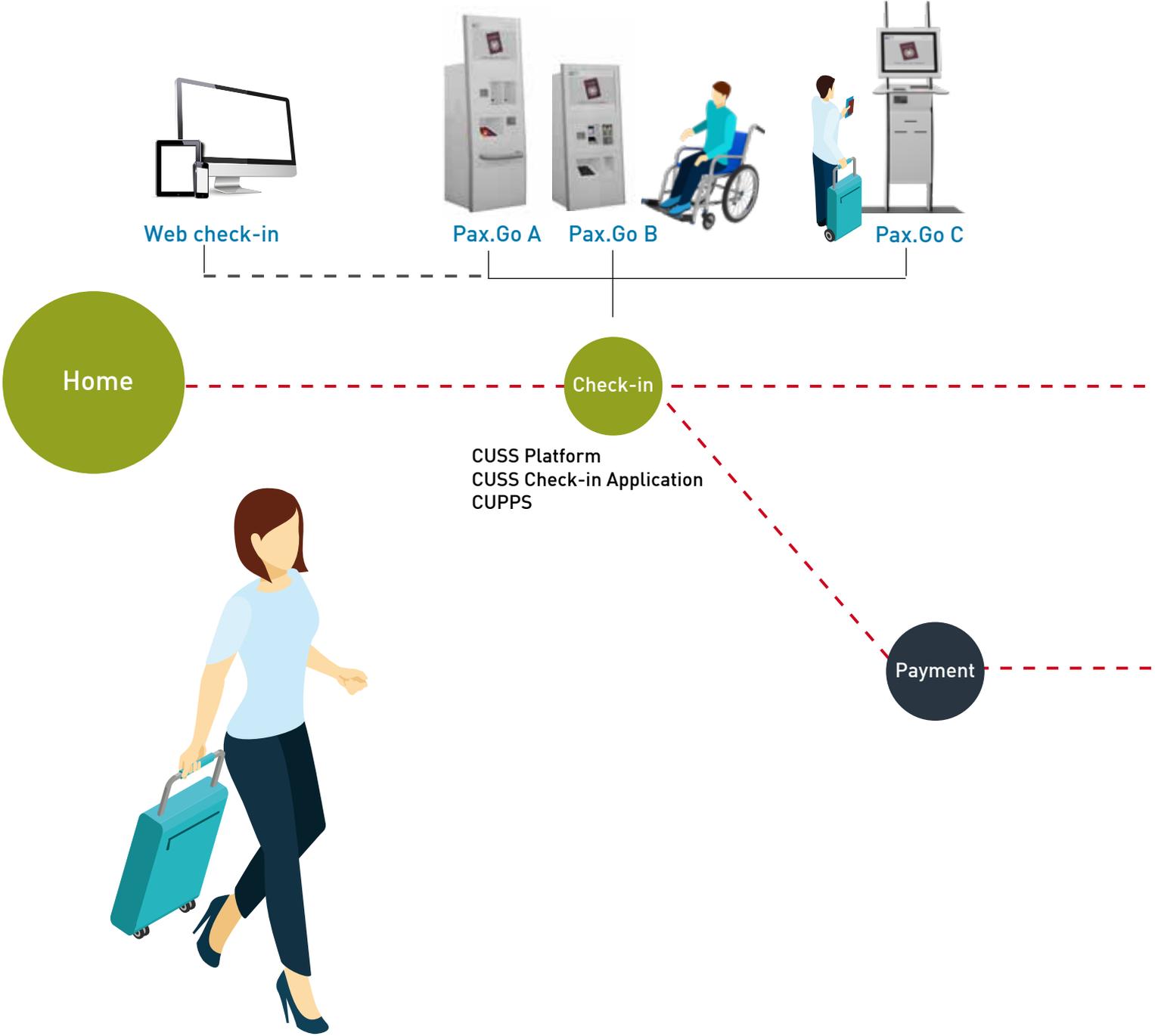
specific applications based on AEA criteria. So, no more adaptations to the airline applications are required.

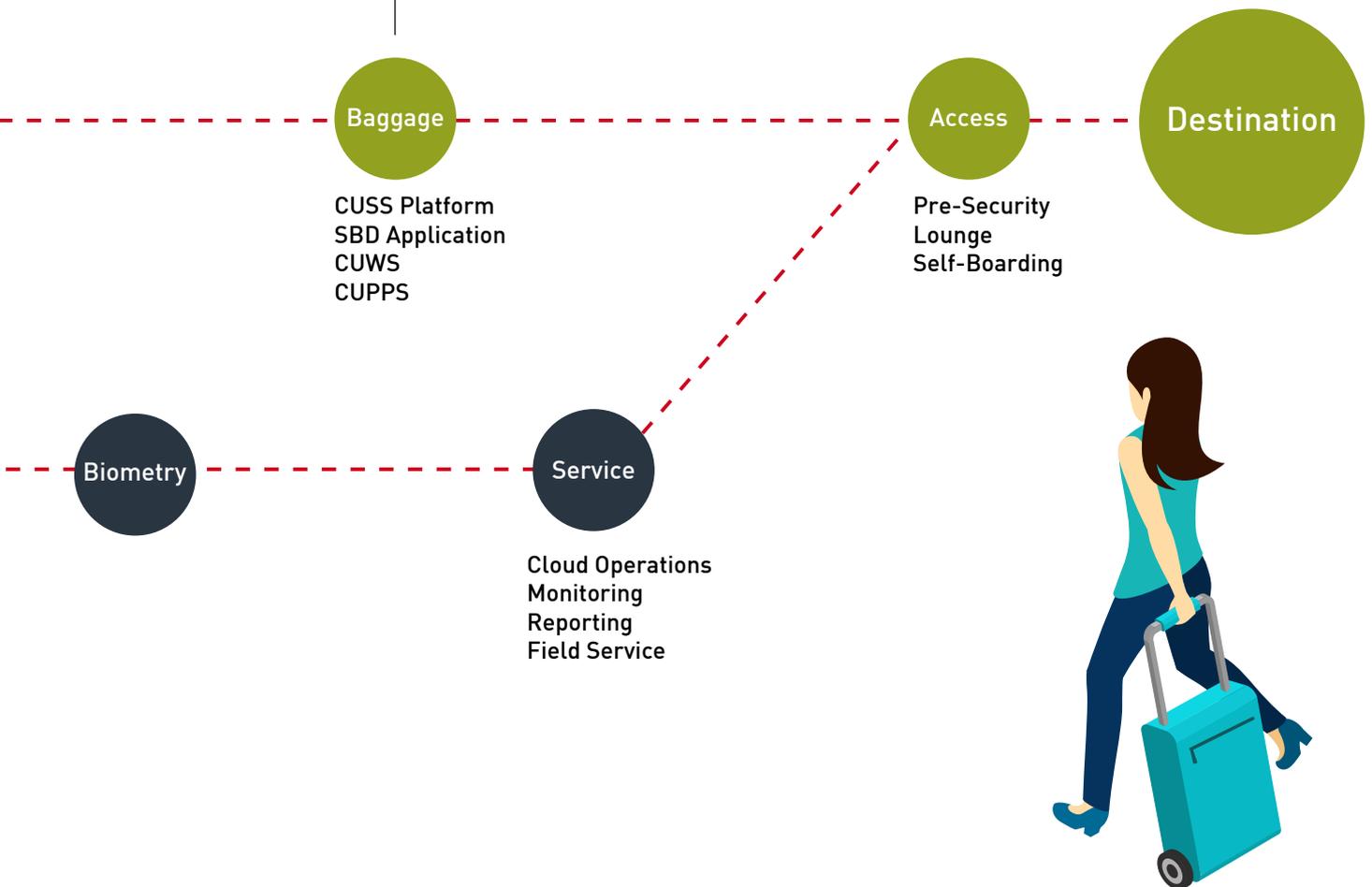
What makes us outstanding

- Full usage transparency via a dashboard with numerous reports and statistics
- Improved security by avoiding multiple access, tailgating and misuse - biometric functions available as an additional security feature
- More convenience for passengers due to mobile reception of additional information such as estimated walking times to the gates
- More flexibility through the creation of airside passenger lists

Integrated Passenger Solutions

From home to destination







Materna installation @ London Gatwick Airport



Payment

Pay for extras on the spot

Let your passengers pay any additional charges directly at the point of request so they don't have to search the airport for a payment counter! Our payment services provide a payment system that can be used by airlines and airline applications operating on our devices, such as on check-in kiosks or self-service bag drop systems in common use or dedicated environments.

You can also make use of our handheld payment devices for passenger service agents. Our payment services provide a PCI DSS-compliant, simple to implement and manageable system that is based on strict but simple relations between customers, Materna and a payment service provider.

What makes us outstanding

- Maximum passenger convenience as payment systems are integrated directly in the kiosks
- Multi-airline payments at kiosks due to CUSS payment standard implementation
- Best practice with chip-and-PIN-based credit card payment
- One-stop-shop due to full service offering (kiosk hardware and software, payment integration)



Materna biometrics installation



Biometrics

Seamless travel with single token

We help to make the journey through airport terminals more convenient for passengers. Multiple checkpoints managed by different stakeholders with stringent security measures in place mean this is still quite difficult to achieve.

However, biometric technology, whether it is based on fingerprints, iris scan, face or voice recognition, can easily be integrated in all Maternaps components and give your passengers a truly seamless travel experience. Our experts will advise you on the right choice and appropriate uses for your individual application.

What makes us outstanding

- Supports single biometric tokens
- Biometric scanner units can be installed at all biometric touchpoints (check-in, bag drop, access)
- Flexible use of biometric technology (iris scan, fingerprint, face or voice recognition)



Materna installation @ Stockholm/Arlanda



Software

Common Use Software Solutions from the experts

We deliver state of the art common use solutions covering passenger and agent facing systems, common use web-services and payments. Our CUSS platform and applications have already been proven in many self bag drop and check-in installations worldwide and have also been integrated in other vendors' hardware.

We offer certification for 3rd party applications that are to be operated on our platforms and provide appropriate training programs for CUSS and CUPPS to airports, airlines, ground-handlers and partners.

What makes us outstanding

- Materna plays a significant role in defining the common use standards.
- Our solutions comply with the latest IATA standards.
- IPS biometric solutions are in line with the IATA One-Identity program.
- Using our services reduces costs through simplified development, installation, support and ongoing maintenance.



Dashboard @ Materna data center

Easy monitoring of self-service systems Materna SMART

Using the SMART tool we have developed, you can easily monitor your traffic numbers, upcoming maintenance requirements, failures, downtime or peak loads in our intuitive dashboard-based control center. This means

that you always know when to send out your technicians to do predictive maintenance or repairs.

Floorwalker App Argus

With our new app for airports and airlines we offer a service for notifications, control and communication. Agents have a constant overview of all their kiosks and stations. Using Android or iOS smartphones or tablets, the app gives an overview of all the kiosks in operation

as well as single views of each kiosk, with more details about their printers, scanners and other tools. Agents receive direct notifications when there are calls for help and for simple administration tasks at the kiosks.



Service

Solving issues before they become problems

You can only work proactively, instead of just reacting, if you always know the status of your applications, machines and connections. You can easily find out about your traffic numbers, upcoming maintenance requirements, failures, downtime or peak loads, on our intuitive dashboard-based control center.

Send your technicians to do predictive maintenance or repairs before issues become problems and before your passengers suffer from any delays or inconvenience. Or even better – completely outsource this to us. Our certified cloud-based data center can host and monitor your applications 24/7 and our service team can take care of all your equipment out in the field.

What makes us outstanding

- Certified cloud-based data center for hosting and monitoring
- Intuitive dashboard-based control center for real-time surveillance
- Our own service and maintenance team

Some of our customers

London Gatwick Airport



- Second largest airport in the UK
- Self bag drop (CUSS platform and applications) for easyJet, Thomson Airways and British Airways

John Wayne Airport, California



- Only commercial airport in Orange County, California (35 miles south of Los Angeles)
- Check-in kiosks and CUPPS workstations, self bag drop system tests
- CUSS platform, integrated payment with chip-and-PIN

Vienna Airport



- Austria's biggest airport and hub for Austrian Airlines, Eurowings
- Check-in kiosks and retrofit self bag drop
- Administration, management, remote services

Oslo Airport



- Main domestic hub for Norway and second busiest airport in the Nordic countries
- Retrofit self bag drop systems

Copenhagen Airport



- Largest Airport in Denmark and the Nordic countries
- Retrofit self bag drop systems

Athens International Airport



- Busiest airport in Greece and main base for several regional airlines
- Retrofit self bag drop systems based on CUSS platform
- Pre-security gates

Minneapolis-Saint Paul International Airport



- Air.Go Double Unit (SBD Trial)
- Materna-ips Bag Drop Application, Servicing American Airlines Self-Bag Drop Proof of Concept

Aéroport international Jean-Lesage de Québec



- Drop.Go C units for self bag drop
- Materna ips SBD application

Aéroport international Pierre-Elliott-Trudeau de Montréal



- Air.Go self bag drop units
- Materna ips SBD application



Lufthansa

- Largest German airline and largest airline in Europe (fleet size)
- Web check-in, check-in kiosks, self bag drop, on-site airport maintenance, hosting, mobile encashment
- CUSS platform and check-in application



Emirates

- Largest airline in the Middle East
- CUSS platform and check-in application



Eurowings

- German low-cost airline, subsidiary of the Lufthansa Group
- CUSS platform and check-in application
- Check-in kiosks
- Self bag drop



Swedavia

- Owns and operates the ten major airports in Sweden
- Check-in kiosks, self bag drop
- Based on CUSS and CUWS standards
- Boarding gates



Hamburg Airport

- Fifth-busiest commercial German airport (no. of passengers)
- Check-in kiosks, self bag drop, pre-security gates
- Based on CUSS standard



Toronto Pearson International Airport

- Largest and busiest airport in Canada
- Self bag drop based on CUSS standard



ACSA – Airport Company South Africa

- Operates nine of South Africa’s airports
- Secure access points
- Central hosting, administration and management in Johannesburg



Finavia

- Maintains and develops 28 Finnish airports
- CUPPS platform (UltraCUSE)
- 3rd level and remote support



dnata

- Dubai national air transport association
- CUSS platform and check-in applications
- Application in use by more than 20 airlines



Avinor

- Operates most of the civil airports in Norway
- Check-in kiosks
- CUSS platform



easyJet

- British low-cost carrier, second largest airline in Europe (no. of passengers)
- Check-in application and self bag drop systems
- CUSS platform and check-in application
- Integrated payment with chip-and-PIN



Kempegowda International Airport Bengaluru

- double units Air.Go (SBD)
- MATerna ips CUSS platform and applications

Contact us

Materna ips is part of the Materna group, a global IT service provider founded in 1980, which currently employs approximately 2,100 staff.

Headquarters

Materna Information &
Communications SE
Vosskuhle 37
44141 Dortmund
Germany

Materna Information &
Communications Norway AS
Kanalveien 18
2004 Lillestrøm
Norway

Materna Information &
Communications Corp.
5323 Millenia Lakes Blvd.
Suite 300
Orlando FL 32839
USA

Materna Communications PLC
Boston House, Boston Road
Henley-on-Thames
Oxfordshire RG9 1DY
Great Britain

Materna Information &
Communications Inc.
40 University Ave
Suite 904
Toronto Ontario M5J 1T1
Canada

Materna Information &
Communications India Pvt. Ltd.
RMZ North Star
CoWrks, 2nd floor
Yelahanka, Bangalore 560064
Karnataka, India

For more information:
www.materna-ips.com